

WHAT IS CLAIMED IS:

1           1. A data storage system including two or more storage devices that are  
2 remotely coupled to each other, comprising:

3                 at least two host devices coupled together by a network interface;

4                 at least two data transfer interfaces, each of which corresponds to one of the  
5 host devices;

6                 at least two storage devices, each of which is coupled to one of the host  
7 devices, and which are coupled to each other by a remote copy interface, and which have  
8 duplicated determining volumes respective; and

9                 a determination function of using the determining volumes in competition for  
10 an exclusive usage right among said host devices when a failure occurs in the network  
11 interface or the host device.

12

1           2. The data storage system according to claim 1, further comprising:  
2                 an exclusive control function that controls the determining volumes to  
3 determine one of the host device exclusively.

4

1           3. A data storage system including at least two storage devices remotely  
2 coupled to each other, comprising:

3                 at least two host devices coupled by a network interface to each other, and  
4 having respective paired volume control software;

5                 at least two data transfer interfaces, each of which correspond to one of the  
6 host devices;

7                 at least two storage devices, each of which is coupled to one of the host  
8 devices, and which are coupled to each other by a remote copy interface, and which have a  
9 commonly-used paired volume made by the remote copy interface;

10                 a first function for forwarding a reserve command issued from one of the host  
11 devices to exclusively use the paired volume, by way of said paired volume control software,  
12 toward the storage device; and

13                 a second function for receiving a normal end response from the storage device  
14 corresponding to the reserve command, for issuing a command for controlling the paired

15 volume toward the storage device, and for issuing a transition command for changing an  
16 attribute of said paired volume;

17 wherein the data storage system determines the host device that is received  
18 with the normal end response, as only one host device to access the paired volume.